

# EUROPEAN PATENT OFFICE

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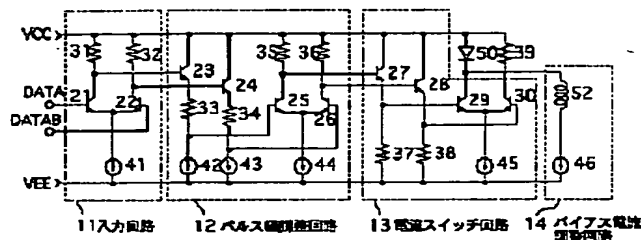
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APPLICANT : NEC CORP;

INVENTOR : SAKUKAI MASASHI;

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H04B 10/04 H04B 10/06 H01S 3/096  
H01S 3/103

TITLE : PULSE WIDTH ADJUSTMENT CIRCUIT  
AND SEMICONDUCTOR LASER  
DRIVING CIRCUIT



ABSTRACT : PROBLEM TO BE SOLVED: To provide a semiconductor laser drive circuit that changes increasingly or decreasingly the duty ratio of a modulation signal applied to a semiconductor laser.

SOLUTION: Received in-phase and inverted data signals DATA, DATAB are waveform-shaped in an input circuit 11 and the resulting signals are outputted to a pulse width adjustment circuit 12. A level shift circuit of the pulse width adjustment circuit 12 shifts the levels of the in-phase and the inverted signals by a proper level individually and a differential amplifier circuit calculates a difference of the both, where the duty ratio is converted. An output current of a current source included in the level shift circuit adjusts the amount of the level shift. An output of the differential amplifier circuit is given to a current switch circuit 13, where the output is converted into an injection current applied to a semiconductor laser 5.

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